

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-69-3
Relating to Exemptions under Section 27156
of the Vehicle Code

CONDENSATOR, INC.
Condensator Supplementary Carburetor
Models B and C

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Condensator Supplementary Carburetor Models B and C manufactured by Condensator, Inc. 2010 Trimble Way, Sacramento, CA 95825, has been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for the vehicles, by model, listed below:

Model B

- i) 1984 and older model-year gasoline powered motor vehicles equipped with either three-way catalyst with feed-back controls or oxidation catalyst emission controls.

Model C

- ii) 1984 and older model-year gasoline powered motor vehicles excluding those covered by the Model B device.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

Changes made to the design or operating conditions of the device, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of a kit as an individual device.

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This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE CONDENSATOR SUPPLEMENTARY CARBURETOR MODELS B AND C.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at El Monte, California, this 6th day of February, 1984.



K. D. Drachand, Chief
Mobile Source Division

STATE OF CALIFORNIA
AIR RESOURCES BOARD

EVALUATION OF CONDENSATOR, INC.'S MODELS B AND C CONDENSATOR
SUPPLEMENTARY CARBURETOR FOR EXEMPTION FROM THE PROHIBITIONS
OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222,
TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

January, 1984

STATE OF CALIFORNIA

AIR RESOURCES BOARD

EVALUATION OF CONDENSATOR, INC.'S MODELS B AND C CONDENSATOR
SUPPLEMENTARY CARBURETOR FOR EXEMPTION FROM THE PROHIBITIONS
OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222,
TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

by

Mobile Source Division

State of California

Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Condensator, Inc. has requested that their 1983 Executive Order D-69-2 be updated to include 1984 and older model-year vehicles.

The staff reviewed the designs of the Condensator devices and the Board's Vehicle Certification files. Since the 1984 model-year vehicles are of the same designs as the 1983 year models and since the devices have been found to have no adverse effects on the applicable 1983 vehicles, they will also have no effect on applicable 1984 vehicles either.

The staff, therefore, recommends that the requested exemptions be granted and that Executive Order D-69-3 be issued.

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STATE OF CALIFORNIA

AIR RESOURCES BOARD

Evaluation of Condensator, Inc.'s Models B and C Condensator
Supplementary Carburetor for Exemption from the Prohibitions of Vehicle Code
Section 27156 in Accordance with Section 2222, Title 13 of the California
Administrative Code

I. INTRODUCTION

Condensator, Inc., 2010 Trimble Way, Sacramento, CA 95825, has applied for update exemption for the Model B and the Model C Condensator Supplementary Carburetors. Exemption is sought for use of these devices on the vehicles, by model, listed below:

Model B

- i) 1984 and older model-year gasoline powered motor vehicles equipped with either three-way catalyst with feed-back controls or oxidation catalyst emission controls.

Model C

- ii) 1984 and older model-year gasoline powered motor vehicles excluding those covered by the Model B device.

The two models differ slightly in that the Model B is a combination air bleed and oil separator while the Model C is an oil separator only.

The Board previously performed comparative exhaust emissions tests on the Model B device and evaluated the operating principles of the Model C device. This report describes the evaluation of both devices.

II. CONCLUSIONS

The results of the Board's previous comparative exhaust emission tests revealed that no significant emissions increase was found with the use of the Model B device. Testing was performed on a 1983 model-year vehicle equipped with three-way catalyst and feed-back controls which could be sensitive to the effects of the device. The Model C device was found, through an engineering evaluation, not to reduce the effectiveness of the pollution control devices found on 1983 model-year vehicles in which the Model B is not applicable. Since the 1984 model-year vehicles (engines) are of the same designs as the 1983 year models, the devices will have no adverse effects on applicable 1984 model-year vehicles either.

III. RECOMMENDATIONS

Based on no adverse emissions impact with the use of either Model B or Model C Condensator Supplementary Carburetor for limited 1984 model-year vehicles, the staff recommends that Condensator, Inc., be granted exemption from the prohibitions of Vehicle Code Section 27156 for the vehicles as requested and that Executive Order D-69-3 be issued.

IV. DEVICE DESCRIPTION

The Condensator Supplementary Carburetor Models B and C are similar in appearance. Both have a metal body with three internal passages leading through an absorbent separator containing small beads retained by wire mesh to an enclosed collector. Two of the passages allow for a series connection to the vacuum hose of the positive crankcase ventilation (PCV) system between the PCV valve and intake manifold. The third passage is vented to the atmosphere and has a 0.040 inch fixed orifice. The collector is a one quart glass jar

with a threaded mouth which screws onto the bottom of the metal body. The external opening of each passage is threaded to accept a fitting. The Model C maintains the same two connections to the PCV system but seals the third passage to the air bleed vent.

In operation, blow-by gases from the crankcase which normally are pulled into the intake manifold are routed through the device. The crankcase gases combined with suspended oil particles are separated as they circulate in the device. The entrapped oil is accumulated at the bottom of the jar while the gases proceed to the intake manifold. The manifold vacuum also pulls air into the device through the device's air bleed vent. The incoming air combines with the crankcase gases and dilutes them. The diluted blow-by gases are then mixed with the fresh air/fuel mixture in the intake manifold and are subsequently burned during combustion in the cylinders.

V. DISCUSSION

The Board has evaluated the Condensator devices since their inception in 1976. Three models of the device exist: Models A, B, and C of which only the Models B and C are involved in the update application. The Model A and B have similar designs and both incorporate an oil separator to entrap oil particles contained, to a limited degree in the crankcase gases and both have air bleed orifices allowing ambient air to enter these devices under the engine suction force. The orifice sizing has been of concern since excessive flow may affect exhaust emissions, especially on small cubic inch displacement (CID) engines. Therefore, the Model A with its larger (0.060 inch) orifice was restricted to 1976 and older model-year vehicles with engines greater than 140 CID. The Model B with its smaller (0.040 inch) orifice, based on comparative emission

test results, was allowed on limited 1983 and older model-year vehicles. The Model C is a simple oil separator without an air bleed orifice, it was allowed for the remaining 1983 model-year vehicles.

The staff has determined through an engineering evaluation that the Condensator devices will not adversely affect exhaust emissions when used in their proper application. Evidence to supplement this fact was found during previous exhaust emission evaluations of the devices. The emission controlling components found on today's vehicles dictate, to a large degree, the effect of air bleed add-on device, such as the Condensator device, on the engine's over all emission output.

Engines which could be sensitive to the effects of an air bleed will use the Model C device while other limited engine models (subsequent to 1976 model-years) use the Model B device.

Benefits alleged by the applicant for the device have not been substantiated (to the Board's knowledge) through any valid laboratory tests. One of their claims makes reference to the device's ability to "Cuts fuel costs up to 27%." This claim is unfounded by any of the Board's exhaust emission evaluations in which the derived fuel economy comparisons were made.